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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): TURPEN, et al.

Serial No.: 10/602,219

Group Art Unit: 1652

Filed: 6/23/2003

Examiner: RAMIREZ, Delia M.

Title: Production of Lysosomal Enzymes in
Plants by Transient Expression

Attorney Docket No.: LSBC-0087-CN09B

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

This Information Disclosure Statement is submitted under 37 CFR 1.97(b) (before mailing date of first office action on the merits).

Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

The relevance of the attached references is that this is the closest art of which Applicant is aware. Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

It is requested that the information disclosed herein be made of record in this application.

I hereby certify that this Correspondence is being deposited with the United States Postal service with sufficient postage for first class mail in an envelope address to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date: 18 Sept 2004

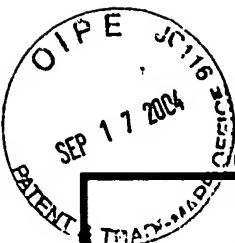
Thomas Gallegos
Thomas Gallegos, Reg. No. 32,692

Respectfully submitted,

Thomas Gallegos
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Attorney for Applicant(s)
Large Scale Biology Corporation

Date: 18 Sept 2004

Telephone No.: (707) 469-2307



PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	10/602,219
				Filing Date	6/23/2003
				First Named Inventor	TURPEN et al.
				Art Unit	1652
				Examiner Name	RAMIREZ, Delia M.
Sheet	1	of	5	Attorney Docket Number	LSBC-0087-CN09B

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

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Sheet	2	of	5	Attorney Docket Number	LSBC-0087-CN09B

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		²
		BORK, "Powers and Pitfalls in Sequence Analysis: The 70% Hurdle", <i>Genome Research</i> (2000) 10:398-400		
		BOWIE, et al., "Diciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions", <i>Science</i> (1990) 247:1306-1310		
		BRADY, "Fabry Disease", <i>Peripheral Neropathy</i> , 3 rd ed., 1169-1178 (1993), W.B. Saunders		
		BROUN, et al., "Catalytic plasticity of fatty acid modification enzymes underlying chemical diversity of plant lipids", <i>Science</i> (1998) 282:1315-1317		
		CHAPMAN, et al., "Potato virus X as a vector for gene expression in plants", <i>The Plant Journal</i> (1992) 2(4):549-557		
		COPPOLA, et al., "Characterization of glycolylated and catalytically active recombinant human α -galactosidase A using a baculovirus vector", <i>Gene</i> (1994) 144:197-203		
		CRAMER, <i>American Journal of Human Genetics</i> , (1995) 57(4), published for the Amercian of Human Genetic by the University of Chicago Press		
		DESNICK, et al., " α -Galactosidase A Deficiency: Fabry Disease", <i>The Metabolic Bases of Inherited Diseases</i> , Chapter 89, pp. 2741-2784 (1995), McGraw-Hill		
		ERICKSON, et al., "BioSynthesis of the Lysosomal Enzyme Glucocerebrosidase", <i>J. Bio. Chem.</i> , (1985) 260(26):14319-14324		
		FERRARI, et al., "Cloning and expression of a soluble sialidase from Chinese hamster ovary cells: sequence alignment similarities to bacterial sialidases", <i>Glycobiology</i> , (1994) 4(3):367-373		
		FRANK, et al., "Automation of DNA Sequencing Reactions and Related Techniques: A Workstation for Micromanipulation of Liquids", <i>Biotechnology</i> , (1988) 6:1211		
		FURBISH, et al., "Enzyme replacement therapy in Gaucher's disease: Large-scale purification of glucocerebrosidase suitable for human administration", <i>Proc. Natl. Acad. Sci.</i> , (1977) 71(8):3560-3563		
		FURBISH, et al., "Uptake and Distribution of Placental Glucocerebrosidase in at Hepatic Cells and Effects of Sequential Deglycosylation", <i>Biochimica et biophysica Acta.</i> , (1981) 673:425-434		

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		GRABOWSKI, et al., "Expression of Functional Human Acid β-glucosidase in COS-1 and <i>Sporodoptera frugiperda</i> Cells", <i>Enzyme</i> , (1989) 41:131-142	
		GRACE, et al., "Analyses of catalytic activity and inhibitor binding of human acid β-glucosidase by site-directed mutagenesis", <i>J. Bio. Chem.</i> (1990) 265:6827-6835	
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		GRACE and GRABOWSKI, "Human Acid β-glucosidase: Glycosylation Is Required for Catalytic Activity", <i>Biochemical and Biophysical Research Communications</i> , (1990) 168(2):771-777	
		HASKINS, et al., "Alpha-L-Iduronidase Deficiency in a Cat: A Model Mucopolysaccharidosis I", <i>Pediat. Res.</i> (1979) 13:1294-1297	
		HOPP, et al., "A Short Polypeptide mark sequence useful for recombinant protein identification and purification", <i>Biotechnology</i> , (1988) 6:1204-1210	
		JONSSON, et al., "Biosynthesis and naturation of glucocerebrosidase in Gaucher fibroblasts", <i>Eur. J. Biochem.</i> , (1987) 164:171-179	
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		KENWARD, et al., "Accumulation of Type I Fish Antifreeze Protein in Transgenic Tobacco Is Cold Specific", <i>Plant Mol. Biol.</i> (1993) 23:377-385	
		KORNFELD and MELLMAN, "The Biogenesis of Lysosomes", <i>Annu. Rev. Cell Biol.</i> , (1989) 5:483-525	
		LEE and RAIKHEL, "Prohevein is poorly processed but shows enhanced resistance to a chitin-binding fungus in transgenic tomato plants", <i>Brazilian J. Med. and Biol. Res.</i> , (1995) 28:743-750	
		MIYAMURA, et al., "A Carboxy-terminal Truncation of Human α-Galactosidase A in a Heterozygous Female with Fabry Disease and Modification of the Enzymatic Activity by the Carboxy-terminal Domain", <i>J. Clin. Invest.</i> , (1996) 98(8):1809-1817	
		MURRAY, et al., "Production of Recombinant Human Glucocerebrosidase in Plants", <i>Fed. of American Soc. for Experimental Biology</i> , (1996) 10(6):a1126	
		PARK, et al., "Structure and nucleotide sequence of tomato HMG2 encoding 3-hydroxy-3-methyl-glutaryl coenzyme A reductase", <i>Plant Mol. Biol.</i> (1992) 20:327-331	

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		SCHATZLE, et al., "Molecular Cloning and Characterization of the Structural Gene Coding for the Developmentally Regulated Lysosomal Enzyme, α -Mannosidase, in <i>Dictyostelium discoideum</i> , <i>J. Bio. Chem.</i> (1991) 267(6):4000-4007	
		SCHULZ and SCHIRMER, "Principles of Protein Structure", (1979) pp. 14-16, Springer-Verlag, eds.	
		SCOTT, et al., "Structure and Sequence of the Human α -L-Iduronidase Gene", <i>Genomics</i> , (1992) 13:1311-1313	
		SCOTT, et al., "Human α -L-iduronidase: cDNA isolation and expression", <i>Proc. Natl. Acad. Sci. USA</i> , (1991) 88:9695-9699	
		SEFFERNICK, et al., "Melamine Deaminase and Atrazine Chlorohydrolase: 98 percent Identical but Functionally Different", <i>J. Bacteriol.</i> (2001) 183(8):2405-2410	
		SHULL, et al., "Enzyme replacement in a canine model for Hurler syndrome", <i>Proc. Natl. Acad. Sci. USA</i> , (1994) 91:12937-12941	
		SIJMONS, et al., "Production of Correctly Processed Human Serum Albuminin Transgenic Plants", <i>Biotechnology</i> , (1990) 8:217-221	
		SORGE, et al., "Molecular cloning and nucleotide sequence of human glucocerebrosidase cDNA", <i>Proc. Natl. Acad. Sci. USA</i> , (1985) 82:7289-7293	
		TAKAMATSU, et al., "Expression of bacterial chloramphenicol acetyltransferase gene in tobacco plants mediated by TMV-RNA", <i>EMBO J.</i> , (1987) 6(2):307-311	
		THORNBURG, et al., "Wound-inducible expression of a potato inhibitor II-chloramphenicol acetyltransferase gene fusion in transgenic tobacco plants", <i>Proc. Natl. Acad. Sci.</i> (1987) 84:744-748	
		TSUJI, et al., "Nucleotide Sequence of cDNA Containing the Complete Coding Sequence for Human Lysosomal Glucocerebrosidase", <i>J. Bio. Chem.</i> (1986) 261(1):50-53	
		VANDEKERCKHOVE, et al., "Enkephalins Produced in Transgenic Plants Using Modified 2S Seed Storage Proteins", <i>Biotechnology</i> , (1989) 7:929-933	
		VIERSTRA, "Protein Degradation in Plants", <i>Annual Review of Plant Physiology and Plant Molecular Biology</i> (1993) 44:385-410, Annual Reviews, Inc., Palo Alto, California	
		VON FIGURA and HASILIK, "Lysosomal Enzymes and Their Receptors", <i>Ann. Rev. Biochem.</i> , (1986) 55:167-193	

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